

# Music to our ears: creating a culture of deliberate practice in music through technology

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It is widely acknowledged across educational literature that a certain amount of regular practice is required in order to improve a music student's level of performance on their instrument. This is nothing new – teachers, coaches, trainers and educators all over the world have assigned (and continue to assign) scale drills, homework questions and listening exercises, all in the spirit of practice. Closer inspection of the research, however, reveals that what constitutes 'practice' is somewhat inconsistent – it is increasingly apparent that not all forms of practice were created equally. Beyond simply the 'doing' of practice lies a challenging question for every music educator: how much do you – and your students – know about *how* to practice a particular skill? Understanding how to get the best possible outcome through practice has significant implications for music students and educators alike, who by the 'elective' nature of their subject area often struggle to compete for time and resources in fast-moving schools driven by overcrowded curriculum.

Anders Ericsson and Robert Pool's 2016 book *Peak: How all of us can achieve extraordinary things* has reopened the conversation around how musical skills (and skills, generally) are developed through practice to the point of expert performance. In *Peak*, the authors argue that the improved performance lies in individuals adopting what they describe as deliberate practice – 'effortful, goal-directed and intentionally structured activities.' Ericsson and Pool's claim is substantiated elsewhere in the research – in their meta-analysis of the literature on the



practice and performance, Macnamara, Hambrick and Oswald (2014, p. 1608) found that 'deliberate practice accounts for 26% of the variance in performance for games, 21% for music... (and) 18% for sports.'

Lehtinen, *et al.* (2017, p. 625) points out that deliberate practice 'is not a mechanical or repetitive process of making a performance more fluid.' This is *not* merely a case of 'play it until you get it,' simply repeating a given musical piece over and over until something 'sticks.' Indeed, the

researchers argue that deliberate practice requires 'a great deal of thinking, problem solving and reflection for analysing' in order to cultivate evolving levels of musical performance. (Lehtinen, *et al.*, 2017, p. 625) While deliberate practice is strongly linked to improved performance in several domains, a significant issue remains: deliberate practice is not necessarily an engaging or positive experience for music students. Miksza (2007, p. 360) suggests that because deliberate practice 'requires sustained concentration and effort... (it

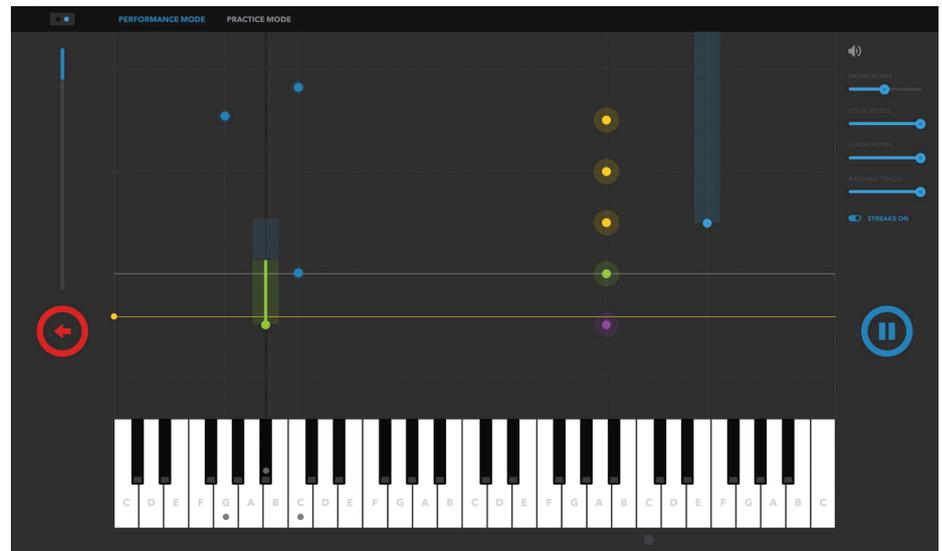
is therefore somewhat distinct from... playing for fun.'

It has been suggested that, in principle, 'individuals should be able to perform such (deliberate) practice on their own,' pointing out that an individual's capacity to develop self-regulation around deliberate practice can accelerate improvements in performance. (Lehtinen, *et al.*, 2017, p. 630) That said, establishing a self-regulated approach to deliberate practice requires significant motivation on the behalf of the student – doing so necessitates that they become responsible for 'setting up goals that have to be reached... knowing the 'culture' of skilled activity, monitoring their own progress and gaining specific feedback' (Lehtinen, *et al.*, 2017, p. 630). Given their perceived lack of 'fun', under the current circumstances it would appear unlikely that music students would feel sufficiently inspired to develop a self-regulated approach to deliberate practice.

In summary, this research suggests two main challenges for music educators, and the school leaders who support them:

- 1 How can deliberate practice be made sufficiently 'fun' for music students?
- 2 How can music educators inspire their students to adopt an increasingly self-regulated approach towards deliberate practice?

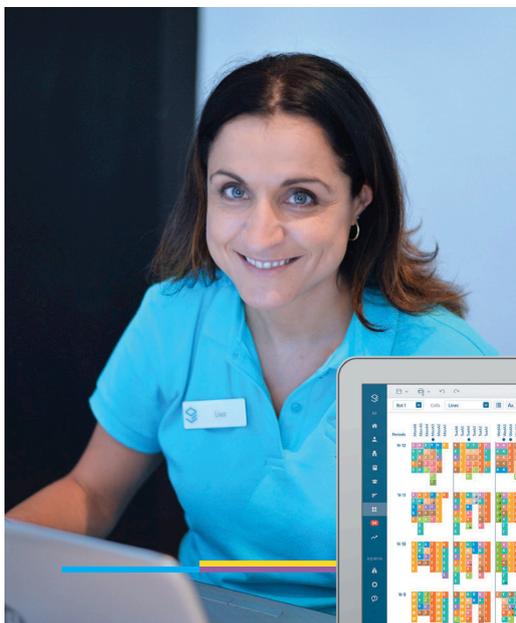
It is my view that technology has a critical role to play in addressing both of these questions, and in the re-invigora-



Melodics' online music education interface

tion of deliberate practice within music education and throughout the education system more broadly. Consider, for example, Melodics – an online music education platform that stands out as an inspiring contemporary example of how technology can be leveraged to establish deliberate practice as an attractive activity for students of piano, drums and pad controllers. A combination of motivational technology, deliberate practice methodology and relevant audience-specific content produced by contemporary musicians results in a user experience where students are highly motivated to establish and monitor their own targets for improvement.

As students practice real-world musical examples specifically targeted to their 'learning edge,' (a contemporary term referencing Vygotsky's zone of proximal development), students receive immediate feedback with a detailed breakdown following every performance. As students engage in self-reflection and determine what they ought to address next, they can elect to complete courses which focus on developing a particular skill. The platform is enriched through the incorporation of gamification – 'the use of game design elements in non-game contexts' (O'Connell, 2018) – such as the unlocking of additional musical content upon



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reaching particular performance milestones. This further incentivises students to adopt a program of deliberate practice and encourages greater habits of self-regulation. The recent work of Alabbasi (2018, p. 34), found that ‘students have a positive attitude and perception about gamification in learning ... because it helped them in the retention of knowledge.’

The ‘anytime, anywhere’ nature of a technology-enabled solution, in conjunction with the mobility afforded by laptops and personal devices, affords today’s music students a greater degree of personal flexibility around their own deliberate practice regimes than ever before. Practice sessions are no longer necessarily limited to a particular time and location (Tuesdays at 10:00 am in Practice Room 3, or after school with an expensive private tutor, for example) as they have been historically.

Curiously, the shift towards deliberate practice platforms like Melodics means the presence of a teacher is not necessarily a requirement – this presents a unique opportunity for music educators to reflect upon and strengthen the relational aspects of their role as a means of enhancing student performance. While Gruber, *et al.* (2004, p. 222) argues that ‘the role teachers play in early phases of acquisition of expertise, and whether they are indispensable, is still an open question.’ This is not an argument in support of removing educators from their classrooms – a significant body of literature supports the notion that the individual teacher (in terms of the quality of relationship between teacher and student) remains the single-largest

determinant on student engagement.

Instead, what I argue for is that school leaders and educators embrace the integration of technology-enabled deliberate practice as a means of enabling greater *agility* in their existing programs, rather than attempting to automate or outsource them. Whilst limited peer-reviewed, empirical research has yet to be undertaken on Melodics specifically, the fact that the platform has developed a user base of more than 200,000 musicians across the globe speaks to the growing demand for technology-driven platforms that facilitate genuinely engaging deliberate practice. It is exciting to consider how subject areas beyond music might draw inspiration from stories like that of Melodics to re-imagine new ways of deliberately practicing skills.

How Australian schools can most effectively share and scale the benefits of an inspiring music education to the greatest number of students possible has attracted a significant amount of national attention lately. Having attracted more than 465,000 views since its debut, ABC TV’s recent new documentary *Don’t Stop The Music* has struck a powerful chord with Australian audiences, both within and beyond the educational community. The three-part film examines ‘the transformational role music can play in educating children’ (Screen Australia, 2017) through the introduction of a music program in a disadvantaged school.

If we truly want to realise the creative potential in our music students, I believe that it is incumbent upon music educators and school leaders to seize the opportu-

nities new technologies present to foster cultures of self-regulated and engaging cultures of deliberate practice. You never know – you or one of your students might write a hit song along the way!

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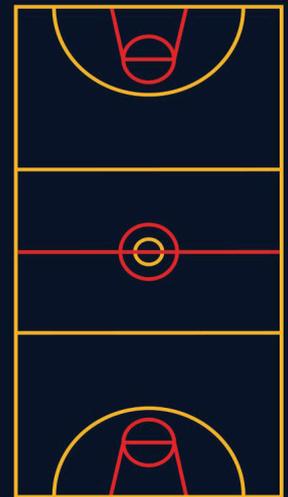
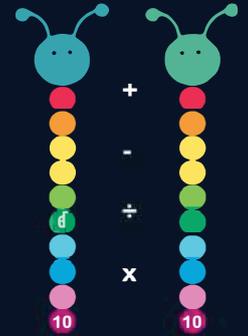
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